# THE MINERAL INDUSTRY OF OREGON

In 2000, the estimated value[1] of nonfuel mineral production for Oregon was $338 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a 6% increase from that of 1999[2] and followed a 6% increase from 1998 to 1999. The State was 36th in rank among the 50 States in total nonfuel mineral production value, of which Oregon accounted for about 1% of the U.S. total.

Industrial minerals accounted for all of Oregon's nonfuel mineral production. In 2000, crushed stone and construction sand and gravel, by value, remained Oregon's two leading nonfuel mineral commodities, followed by portland cement, diatomite, and lime. The former two accounted for approximately 67% of the State's total, while all five combined represented more than 95% of the State's total raw nonfuel mineral economy (table 1). In 1999, portland cement led the State's increase with a more than $13 million rise in value, along with pumice and pumicite (mostly pumice) and diatomite, the values of which were up a combined $6 million. Although construction sand and gravel production dropped off somewhat, it gained almost $6 million in value. This was offset by a nearly identical drop in the value of crushed stone, for which production conversely increased. The only other decreases were those of gemstones, lime, and zeolites, all in the range of $2 million or less. Other gains in value were those of bentonite, common clays, emery, and talc, all up slightly.

Based upon USGS estimates of the quantities of raw minerals produced in the United States during 2000, Oregon remained first among six States that produce pumice and pumicite and third in diatomite and zeolites. The State rose in rank to second from third in perlite, dropped to seventh from sixth in gemstones (by value), and produced significant quantities of crushed stone and construction sand and gravel (descending order of value). There was no emery production in 2000; the Country's sole producer could not operate its claims because of a long forest fire season. Primary aluminum and raw steel were produced in Oregon but were processed from materials obtained from other domestic and foreign sources. Among 14 primary aluminum-producing States, Oregon ranked 13th in 2000.

The following narrative information was provided by the Oregon Department of Geology and Mineral Industries.[3] There were no new mineral discoveries announced by any companies in 2000, and no major exploration programs were in progress in the State. Alcoa Inc. (formerly Reynolds Metals Company prior to a merger June 2000) in Troutdale and Northwest Aluminum Corp. in The Dalles closed down their 121,000-metric-ton-per-year and 82,000-metric-ton-per-year, respectively, smelting operations owing to increases in regional power demand and cost. Globe Metallurgical, Inc. in Springfield also shut down its production of silicon metal because of similar power concerns and because its primary customer was the aluminum industry.

[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the minerals or mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2000 USGS mineral production data published in this chapter are preliminary estimates as of July 2001 and are expected to change. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. A telephone listing of the specialists may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals/contacts/comdir.html, by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists), or by calling USGS information at (703) 648-4000 for the specialist's name and number. All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals; facsimile copies may be obtained from MINES FaxBack.

[2]Values, percentage calculations, and rankings for 1999 may vary from the Minerals Yearbook, Area Reports: Domestic 1999, Volume II, owing to the revision of preliminary 1999 to final 1999 data. Data for 2000 are preliminary and are expected to change; related rankings may also change.

[3] Ronald Geitgey, Economic/Industrial Minerals Geologist with the Oregon Department of Geology and Mineral Industries, authored the text of mineral industry information submitted by that agency.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN OREGON 1/ 2/

(Thousand metric tons and thousand dollars)

| Mineral | 1998 | | 1999 | | 2000 p/ | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Clays: | | | | | | |
| Bentonite | W | W | W | W | 11 | 664 |
| Common | 177 | W | 240 | 77 | 240 | 77 |
| Gemstones | NA | 1,500 | NA | 949 | NA | 1,410 |
| Sand and gravel, construction | 18,600 | 99,200 | 16,900 | 105,000 | 16,300 | 104,000 |
| Stone, crushed | 23,200 | 118,000 | 23,800 | 112,000 | 25,000 | 121,000 |
| Zeolites | (3/) | NA | (3/) | NA | (3/) | NA |
| Combined values of cement (portland), diatomite, emery, lime, perlite (crude), pumice and pumicite, talc and values indicated by symbol W | XX | 82,400 | XX | 101,000 | XX | 111,000 |
| Total | XX | 301,000 | XX | 319,000 | XX | 338,000 |

p/ Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data. XX Not applicable.
1/ Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
2/ Data are rounded to no more than three significant digits; may not add to totals shown.
3/ Withheld to avoid disclosing company proprietary data.

TABLE 2
OREGON: CRUSHED STONE SOLD OR USED, BY KIND 1/

| Kind | 1998 2/ Number of quarries | 1998 2/ Quantity (thousand metric tons) | 1998 2/ Value (thousands) | 1998 2/ Unit value | 1999 Number of quarries | 1999 Quantity (thousand metric tons) | 1999 Value (thousands) | 1999 Unit value |
|---|---|---|---|---|---|---|---|---|
| Limestone | 2 r/ | W | W | W | 2 | W | W | W |
| Granite | 28 | 165 | $777 | $4.71 | 27 | 421 | $1,650 | $3.92 |
| Calcareous marl | -- | -- | -- | -- | 1 | 113 | 36 | 0.32 |
| Sandstone | 1 | 14 | 62 | 4.43 | 1 | 14 | 62 | 4.43 |
| Shell | 1 | W | W | W | 1 | W | W | W |
| Traprock | 232 r/ | 20,500 r/ | 103,000 r/ | 5.02 | 232 | 20,100 | 96,200 | 4.79 |
| Volcanic cinder and scoria | 2 | W | W | W | 2 | W | W | W |
| Miscellaneous stone | 31 r/ | 1,580 r/ | 7,450 r/ | 4.71 r/ | 30 | 1,700 | 6,620 | 3.90 |
| Total | XX | 23,200 | 118,000 | 5.08 | XX | 23,800 | 112,000 | 4.72 |

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable. -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Marble revised to zero.

TABLE 3
OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1999, BY USE 1/ 2/

| Use | Quantity (thousand metric tons) | Value (thousands) | Unit value |
|---|---|---|---|
| Construction: | | | |
| Coarse aggregate (+1 1/2 inch): | | | |
| Macadam | 261 | $2,080 | $7.98 |
| Riprap and jetty stone | 194 | 1,110 | 5.74 |
| Filter stone | 82 | 452 | 5.51 |
| Other coarse aggregate | 478 | 1,510 | 3.15 |
| Coarse aggregate, graded: | | | |
| Concrete aggregate, coarse | 282 | 1,290 | 4.59 |
| Bituminous aggregate, coarse | 465 | 2,180 | 4.68 |
| Bituminous surface-treatment aggregate | 275 | 1,520 | 5.54 |
| Railroad ballast | 341 | 2,390 | 7.00 |
| Other graded coarse aggregate | 202 | 1,150 | 5.71 |
| Fine aggregate (-3/8 inch): | | | |
| Stone sand, concrete | W | W | W |
| Stone sand, bituminous mix or seal | W | W | W |
| Screening, undesignated | 10 | 47 | 4.70 |
| Other fine aggregate | 273 | 955 | 3.50 |
| Coarse and fine aggregates: | | | |
| Graded road base or subbase | 6,730 | 33,400 | 4.97 |
| Unpaved road surfacing | 926 | 4,590 | 4.96 |
| Crusher run or fill or waste | 1,790 | 7,310 | 4.09 |
| Other coarse and fine aggregates | 1,430 | 6,220 | 4.35 |
| Other construction materials | 97 | 341 | 3.52 |
| Chemical and metallurgical, cement manufacture | 1,260 | 3,870 | 3.06 |
| Special, roofing granules | W | W | W |
| Other miscellaneous uses, sugar refining | 238 | 3,130 | 13.14 |
| Unspecified: 3/ | | | |
| Reported | 3,160 | 15,000 | 4.75 |
| Estimated | 5,200 | 23,000 | 4.44 |
| Total or average | 23,800 | 112,000 | 4.72 |

W Withheld to avoid disclosing company proprietary data; included in "Total."
1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
2/ Includes calcareous marl, granite, limestone, miscellaneous stone, sandstone, shell, traprock, and volcanic cinder and scoria.
3/ Reported and estimated production without a breakdown by end use.

TABLE 4
OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1999, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

| Use | District 1 | | District 2 | | District 3 | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Construction: | | | | | | |
| Coarse aggregate (+1 1/2 inch) 2/ | 740 | 3,860 | 194 | 934 | -- | -- |
| Coarse aggregate, graded 3/ | 680 | 3,460 | 117 | 513 | 81 | 487 |
| Fine aggregate (-3/8 inch) 4/ | 242 | 923 | W | W | -- | -- |
| Coarse and fine aggregate 5/ | 6,310 | 31,900 | 1,890 | 8,740 | 358 | 2,110 |
| Other construction materials | W | W | 44 | 161 | W | W |
| Chemical and metallurgical 6/ | -- | -- | -- | -- | -- | -- |
| Other miscellaneous uses 7/ | -- | -- | -- | -- | -- | -- |
| Unspecified: 8/ | | | | | | |
| Reported | W | W | W | W | W | W |
| Estimated | 3,000 | 14,000 | 1,300 | 5,500 | 920 | 4,100 |
| Total | 12,300 9/ | 59,600 9/ | 3,520 | 16,000 | 1,500 | 7,140 |

| Use | District 4 | | Unspecified | |
|---|---|---|---|---|
| | Quantity | Value | Quantity | Value |
| Construction: | | | | |
| Coarse aggregate (+1 1/2 inch) 2/ | W | W | W | W |
| Coarse aggregate, graded 3/ | 527 | 3,200 | 159 | 875 |
| Fine aggregate (-3/8 inch) 4/ | W | W | -- | -- |
| Coarse and fine aggregate 5/ | W | W | W | W |
| Other construction materials | -- | -- | -- | -- |
| Chemical and metallurgical 6/ | 1,260 | 3,870 | -- | -- |
| Other miscellaneous uses 7/ | 238 | 3,130 | -- | -- |
| Unspecified: 8/ | | | | |
| Reported | -- | -- | 1,840 | 8,720 |
| Estimated | -- | -- | -- | -- |
| Total | 2,820 | 14,100 | 3,720 | 15,600 |

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregate.

3/ Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast, and other graded coarse aggregate.

4/ Includes screening (undesignated), stone sand (bituminous mix or seal), stone sand (concrete), and other fine aggregate.

5/ Includes crusher run (select material or fill), graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

6/ Includes cement manufacture.

7/ Includes sugar refining.

8/ Reported and estimated production without a breakdown by end use.

9/ Includes roofing granules to avoid disclosing company proprietary data.

TABLE 5
OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1999,
BY MAJOR USE CATEGORY 1/

| Use | Quantity (thousand metric tons) | Value (thousands) | Unit value |
|---|---|---|---|
| Concrete aggregate and concrete products 2/ | 3,370 | $23,500 | $6.97 |
| Asphaltic concrete aggregates and other bituminous mixtures | 1,570 | 16,000 | 10.19 |
| Road base and coverings 3/ | 5,570 | 33,700 | 6.05 |
| Fill | 1,230 | 5,140 | 4.18 |
| Snow and ice control | 19 | 210 | 11.05 |
| Other miscellaneous uses | 450 | 3,010 | 6.69 |
| Unspecified: 4/ | | | |
| Reported | 2,690 | 13,600 | 5.06 |
| Estimated | 2,000 | 9,700 | 4.85 |
| Total or average | 16,900 | 105,000 | 6.20 |

1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
2/ Includes gunite and plaster sands.
3/ Includes road and other stabilization (cement and lime).
4/ Reported and estimated production without a breakdown by end use.

TABLE 6
OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1999, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

| Use | District 1 | | District 2 | | District 3 | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Concrete aggregates and concrete products 2/ | 2,170 | 14,200 | 699 | 5,410 | 269 | 2,710 |
| Asphaltic concrete aggregates and road base materials 3/ | 5,250 | 36,500 | 1,030 | 8,270 | 416 | 2,580 |
| Fill | 774 | 3,400 | 111 | 493 | 272 | 1,050 |
| Other miscellaneous uses 4/ | 417 | 2,580 | -- | -- | -- | -- |
| Unspecified: 5/ | | | | | | |
| Reported | 2,070 | 12,600 | -- | -- | -- | -- |
| Estimated | 1,300 | 6,300 | 300 | 1,400 | 200 | 1,100 |
| Total | 12,000 | 75,500 | 2,110 | 15,600 | 1,170 | 7,400 |

| | District 4 | | Unspecified districts | |
|---|---|---|---|---|
| | Quantity | Value | Quantity | Value |
| Concrete aggregates and concrete products 2/ | 235 | 1,160 | -- | -- |
| Asphaltic concrete aggregates and road base materials 3/ | 442 | 2,420 | -- | -- |
| Fill | 76 | 195 | -- | -- |
| Other miscellaneous uses 4/ | 51 | 644 | -- | -- |
| Unspecified: 5/ | | | | |
| Reported | -- | -- | 623 | 1,030 |
| Estimated | 200 | 900 | -- | -- |
| Total | 981 | 5,310 | 623 | 1,030 |

-- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes gunite and plaster sands.
3/ Includes road and other stabilization (cement and lime).
4/ Includes ice and snow control.
5/ Reported and estimated production without a breakdown by end use.